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**PHASE II RI GROUNDWATER  
ANALYTICAL RESULTS SUMMARY  
WHEELER PIT  
LaPRAIRIE TOWNSHIP, WISCONSIN**

**RI/FS OVERSIGHT  
EPA REGION V**



**JACOBS ENGINEERING GROUP INC.  
ENVIRONMENTAL SYSTEMS DIVISION**

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
TECHNICAL ENFORCEMENT SUPPORT  
AT  
HAZARDOUS WASTE SITES**

**TES IV  
CONTRACT NO. 68-01-7351  
WORK ASSIGNMENT NO. C05030**

**PHASE II RI GROUNDWATER  
ANALYTICAL RESULTS SUMMARY  
WHEELER PIT  
LaPRAIRIE TOWNSHIP, WISCONSIN**

**RI/FS OVERSIGHT  
EPA REGION V**

**JACOBS ENGINEERING GROUP INC.  
PROJECT NUMBER: 05-B918-00**

**JUNE 1989**



**JACOBS ENGINEERING GROUP INC.**  
**ENVIRONMENTAL SYSTEMS DIVISION**

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June 26, 1989

Mr. Michael Valentino  
TES IV Primary Contact  
U.S. Environmental Protection Agency  
Region V  
230 South Dearborn Street  
Chicago, IL 60604

Re: Contract No. 68-01-7351  
Project No. 05-B918-00  
Work Assignment No. C05030  
Wheeler Pit  
LaPrairie Township, Wisconsin  
RI/FS Oversight  
CERCLA, Region V

Dear Mr. Valentino:

Please find submitted herewith one copy of the Groundwater Analytical Results Summary for Phase II of the Remedial Investigation at the Wheeler Pit site outside of Janesville, Wisconsin. This review of groundwater, surface soil and subwaste soil samples is based on preliminary validated results from Warzyn's laboratory which did not include sampling dates.

If you have any questions or require additional information, please feel free to contact Nancy Prince at (303)232-7093, or me at (312) 648-0002.

Sincerely,

Michael J. Strimbu  
Acting Regional Manager

Enclosure

cc: E. Howard, EPA RPO  
N. Prince, JEG CPM

## Table of Contents

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION	1
2.0 GROUNDWATER	1
3.1 Comments	1
3.2 Quality Control	2
3.3 Recommendations	2
3.0 SUBWASTE SOIL	2
3.1 Comments	2
3.2 Quality Control	3
3.3 Recommendations	3
4.0 SURFACE SOIL	3
4.1 Comments	3
4.2 Quality Control	4
4.3 Recommendations	4
TABLE 1 Ground Water Samples Summary	
TABLE 2 Subwaste Soil Samples Summary	
TABLE 3 Surface Soil Samples Summary	

**COMMENTS ON PHASE II ANALYTICAL RESULTS  
WHEELER PIT  
REMEDIAL INVESTIGATION/FEASIBILITY STUDY**

**1.0 Introduction**

In general, the groundwater and subwaste soil data appear to be of good quality, but the surface soil data is not as acceptable. It is recommended that the data needs for remedial design be reviewed. Additional surface soil data may be recommended, but subwaste soil and groundwater data appears to be adequate to proceed into the FS phase of the investigation.

**2.0 Groundwater**

**2.1 Comments**

Inorganics, indicator parameters, SVOCs, TBNAs and TVOAs were generally reported at their highest concentrations from MW 03A. Some inorganics, indicator parameters and TVOAs were also reported at elevated concentrations at GW B.

Magnesium exceeds secondary drinking water standards in MW 03A and GW B. P-dichlorobenzene concentrations was recorded at .024 mg/l, or 32% of the MCL of .075 mg/l in MW 03A and GW B. Arsenic was also present in MW 03A at .032 mg/l, 64% of the MCL of .05 mg/l.

M-dichlorobenzene, p-dichlorobenzene (SVOCs), 2,2'-azobis[2-methyl] propanenitrile (TBNA), 1,1-dimethyl-cyclohexane and 1,2-dimethyl-trans, cyclohexane (TVOAs) were reported in the Phase II sample from MW 03A. These compounds were also identified at similar concentrations in both EPA and PRP Phase I samples at MW 03A. A variety of other BNAs and VOAs were tentatively identified in Phase I and Phase II samples at concentrations between .006 and .036 mg/l.

Biochemical oxygen demand, chemical oxygen demand, total Kjeldahl nitrogen and ammonia nitrogen were all very high in MW 03A samples relative to other upgradient and downgradient wells. At the time of sampling MW 03A, the water had a rusty color. An odor was also noted at this well which was described as a musty, ammoniac, but not solvent-type odor. The cap was in place on the well at the time of sampling, but field personnel speculated about the possibility that a small animal had died and/or decayed within the annulus between the well and the surface casing.

Other analytes reported may be related to the salt storage near the southeast portion of the site. Sodium, chloride, and zinc appear in relatively elevated concentrations in MW05A and GW B. GW A, closest to the salt storage, however shows some elevation in chloride and zinc concentrations above background, but relatively low sodium concentration.

## 2.2 Quality Control

In general, quality control appears good. A few common lab contaminants appear to be present in field and trip blanks. Lab holding times for aromatics (volatiles) were within CLP requirements, but not within CFR requirements. No aromatics were reported.

The high total dissolved solids concentrations reported from MW 03B might be the result of a misplaced decimal during reporting. Reported values for analytes comprising the total dissolved solids (calcium, magnesium etc.) indicate a total which is much closer to 355 mg/l than the reported 3550 mg/l total dissolved solids.

## 2.3 Recommendations

The data from Phase II appears to track well with Phase I results. MW 04 and MW 05 do not appear to be affected by contaminants from the waste disposal area. MW 03B (deep) well also does not appear to be affected. MW 03A (shallow) contains a variety of organic compounds, potentially from the waste. A limited number of organic compounds are tentatively identified in GW B samples, indicating that this well also is possibly affected.

If potential remedial alternatives require groundwater treatment, then two additional shallow wells would be recommended either as Phase III investigations or during remedial design activities to define the extent of contamination. Both wells should be between the waste disposal area and GW B, with one between MW04 and MW03 and one between MW03 and MW05. If however, it is agreed that the potential for risk to nearby receptors is not sufficient to require groundwater treatment, then it appears the groundwater contamination has been adequately defined at this time.

## 3.0 Subwaste Soil

### 3.1 Comments

Inorganics, TBNAs, and semivolatiles were identified generally in greatest concentrations in SS02 - 15. This boring is located in the western portion of the waste disposal area. Adjacent test pits 1 and 4 indicated the greatest concentration of contaminants during Phase I sampling.

SS04-24 sample analyses indicated the presence of three volatile compounds, in addition to a few semivolatile and TBNA compounds. This boring is located in the southeastern portion of the waste disposal area.

SS06-30 contained levels of arsenic greatly above that found in the background samples, but other inorganics were within background ranges and no organic compounds were reported. This boring is located in the northcentral portion of the waste disposal area.

Two BNAs were tentatively identified from SS03-19 samples, but all inorganics were within background ranges and no other organic compounds were detected. This boring is located near the northcentral boundary of waste.

Very high sodium and bis(2-ethylhexyl)phthalate values were reported from SS01-15-92 and SS01-15-92 (duplicate). No other organics were detected, and other inorganics were within background ranges at this boring. This boring is located at the northwest boundary of the waste, immediately adjacent to the Frank Brothers access road.

### 3.2 Quality Control

Four compounds were identified at similar compositions in all samples, an indication that they could have been introduced as laboratory contaminants. These are methylene chloride, 2-butanone, di-n-butylphthalate and silano, trimethyl.

In general there is good correspondence between the concentrations and compounds identified in the duplicate samples. These duplicates were taken from the least contaminated borings.

### 3.3 Recommendations

The results of these Phase II samples indicate that there has been migration of contaminants from the waste into the soils between the waste and the water table. Some of the semivolatile and BNA compounds identified in the subwaste soils have been previously identified in test pit and groundwater analyses but none were identified in the groundwater samples from this sampling event. Phase III samples are not recommended, but additional sampling may be required to assess source control alternatives during the remedial design activities.

## 4.0 Surface Soil

### 4.1 Comments

A background soil boring SD04-02 was drilled east of the site adjacent to the upgradient monitoring well MW 01 and near County Highway J. The analyses from these samples indicate relatively low concentrations of all analytes except calcium, magnesium, and four tentatively identified BNAs. The native soils contain a large percentage of limestone and dolomite pebbles, which could account for the calcium and magnesium concentrations.

Samples from boring SD06-02 indicated levels of barium, chromium, lead, zinc above those found in the background boring, five semivolatile and nine TBNA compounds. This boring is located at the southern edge of the waste fill area near MW 05.

Boring SD02-02 contained levels of arsenic above those found in the background boring. Fifteen BNAs (ten not found in any other surface soil sample) were also tentatively identified. This boring is in the western portion of the waste disposal area near subwaste sample SS02.

Elevated levels of arsenic, barium, chromium, iron, manganese, potassium, vanadium were reported from boring SD03-01. One semivolatile, and four TBNA compounds were reported. This boring is at the northeast corner of the waste disposal area near the background subwaste boring SS07.

Samples from SD01-01 contained concentrations of aluminum, arsenic, barium, chromium, iron, manganese which were above background boring levels. Three organic compounds, one semivolatile, one TBNA, and one TVOA were also reported. This boring is near the northwestern limit of the waste disposal area near subwaste soil sample SS03 and test pit TP1.

Boring SD05-01 contained slightly elevated concentrations of manganese and zinc. Three BNAs were also tentatively identified in these samples. These organic compounds were also reported in other borings from within the waste disposal area. This boring is outside of the reported waste disposal area to the west, near MW04.

#### 4.2 Quality Control

There is good correspondence between duplicate samples in inorganic compounds detected and their concentrations. There is little correspondence between the semivolatile compounds identified and the tentatively identified BNA compounds in these duplicates however.

Four BNAs were also tentatively identified in the background samples which were not detected in any of the other soil or groundwater samples from the Phase II sampling event.

#### 4.3 Recommendations

There is a lack of correspondence between duplicate surface soil samples. A variety of organic compounds were tentatively identified in samples from outside the waste boundaries as identified by geophysics and verified by shallow borings. This variability may indicate that the distribution of surface contaminants has not yet been defined adequately. More data and/or analysis of existing data would be required prior to development of remedial alternatives.



## GROUND WATER SAMPLES SUMMARY, WHEELER PIT, LaPRAIRIE TOWNSHIP, WISCONSIN

SUMMARY ANALYTICAL RESULTS FOR PHASE II RI  
GROUND WATER SAMPLES ONLY  
WHEELER PIT  
LaPRAIRIE TOWNSHIP  
WISCONSIN

SAMPLING LOCATION/SAMPLE NUMBER (WP-)	MW 01A-02	MW 01B-02	MW 02A-02	MW 02B-02	MW 03A-02	MW 03B-02	MW 03B-92 DUP MW 03B-02	MW 04A-02	MW 04A-92 DUP MW 04A-02	MW 04B-02	MW 05A-02	MW 05B-02
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989
<b>CHEMICAL</b>												
<b>INORGANICS (mg/l)</b>												
Aluminum	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony	.005 (R)	.005 (R)	.005 (UNS)	.005 (R)	.0074 (J)	.005 (R)	.008 (J)	.005 (R)	.005 (R)	.0052 (J)	.0058 (J)	.0058 (J)
Arsenic	ND	ND	ND	ND	.032	ND	ND	ND	ND	ND	ND	ND
Barium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	3.6E-4 (J)	3.6E-4 (J)	2.0E-4 (UNS)	2.0E-4 (UNS)	2.7E-4 (J)	2.0E-4 (UNS)	2.0E-4 (UNS)	2.6E-4 (NS)	2.1E-4 (J)	2.0E-4 (UNS)	2.0E-4 (J)	2.0E-4 (UNS)
Calcium	113	113	108	111	195	111	110	120	128	110	127	112
Chromium (Total)	.003	.0029	.0031	.0028	.0037	.003	.0025	.0047	.0058	.0025	.0038	.0028
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	.05
Iron	ND	.05	ND	ND	8.8	ND	ND	ND	ND	ND	ND	ND
Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium	40 (M)	36.9 (M)	37.3 (M)	38.6 (M)	49.3 (M)	36.5 (M)	37.2 (M)	38.1 (M)	39.6 (M)	37.6 (M)	37.5 (M)	36.2 (M)
Manganese	.044	ND	ND	ND	.158	ND	ND	ND	ND	.028	.027	ND
Mercury	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	.058	ND	ND	ND	ND	ND	ND	.045	.047	ND	ND	.06
Potassium	1.36	1.44	.727	1.49	4.66	1.32	1.34	1.29	1.26	1.29	.781	1.45
Selenium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	5.9	5.7	14.5	5.7	28	5.8	5.8	15.7	15.4	5.8	57	6.9
Thallium	.005 (UNS)	.005 (UNS)	.005 (UNS)	.005 (UNS)	.005 (UNS)	.005 (UNS)	.005 (UNS)	.005 (UNS)	.005 (UNS)	.005 (UNS)	.005 (UNS)	.005 (UNS)
Vanadium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	.282	.063	.088	ND	ND	.202	.096	ND	ND	ND	.119	ND
Cyanide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>INDICATOR PARAMETERS (mg/l)</b>												
Biochemical Oxygen Demand	2	2	ND	ND	13	ND	ND	ND	ND	ND	ND	1
Alkalinity	282	277	301	279	624	281	281	371	365	279	340	286
Chloride	29	27	32	28	51	27	27	30	30	28	122	32
Chemical Oxygen Demand	ND	ND	ND	ND	31	ND	ND	ND	ND	ND	ND	ND
Total Kjeldahl Nitrogen	ND	ND	ND	ND	6.86 (J)	.19 (J)	ND	ND	ND	ND	ND	ND

SUMMARY ANALYTICAL RESULTS FOR PHASE II RI  
GROUND WATER SAMPLES ONLY  
WHEELER PIT  
LA PRAIRIE TOWNSHIP  
WISCONSIN

[illegible]

## GROUND WATER SAMPLES SUMMARY, WHEELER PIT, LaPRAIRIE TOWNSHIP, WISCONSIN

SUMMARY ANALYTICAL RESULTS FOR PHASE II RI  
GROUND WATER SAMPLES ONLY  
WHEELER PIT  
LaPRAIRIE TOWNSHIP  
WISCONSIN

SAMPLING LOCATION/SAMPLE NUMBER (WP-)	MW 01A-02	MW 01B-02	MW 02A-02	MW 02B-02	MW 03A-02	MW 03B-02	MW 03B-92 DUP MW 03B-02	MW 04A-02	MW 04A-92 DUP MW 04A-02	MW 04B-02	MW 05A-02	MW 05B-02
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989

## CHEMICAL

Tentatively identified Base Neutral Acids  
(TBNA) (mg/l)

9-Octadecenamide, (Z)-	ND	.031 (J)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Propanenitrile, 2,2'-Asobis[2-methyl	ND	ND	ND	ND	.018 (J)	ND	ND	ND	ND	ND	ND	ND
Ethanol, 2-(2-methoxyethoxy)-	ND	ND	ND	ND	.016 (J)	ND	.014 (J)	ND	ND	ND	ND	ND
Ethanol, 2-(2-butoxyethoxy)-	ND	ND	ND	ND	.02 (J)	ND	ND	ND	ND	ND	ND	ND
Phosphorous dichloride, [methyl (1-methyl)cyclohexyl]-	ND	ND	ND	ND	.049 (J)	ND	ND	ND	ND	ND	ND	ND
Methane, tert-butoxyisopropoxy-	ND	ND	ND	ND	.012 (J)	ND	ND	ND	ND	ND	ND	ND

Tentatively identified Volatile Organic  
Acid (TVQA) (mg/l)

Cyclohexane, 1,1-dimethyl-	ND	ND	ND	ND	.0079 (JX)	ND	ND	ND	ND	ND	ND	ND
Cyclohexane, 1,2-dimethyl-, trans,	ND	ND	ND	ND	.015 (JX)	ND	ND	ND	ND	ND	ND	ND
Cyclohexane, 1,4-dimethyl-, cis-	ND	ND	ND	ND	.006 (JX)	ND	ND	ND	ND	ND	ND	ND
Decane, 2,3,8-Trimethyl-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptane, 2,2-dimethyl-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

(B) Indicates detected in blank and in the sample; possible/probable blank contamination.

(J) Indicates an estimated value.

(W) Indicates inorganic spike sample recovery is not within control limits.

(R) Indicates data is unusable.

(S) Indicates value determined by Method of Standard Addition.

(W) Post-digestion spike which is out of control for AA analysis

(X) Manual calculation by lab

(\*) Correlation coefficient &lt; 0.995

NA Indicates not analysed.

ND Indicates not detected; see data sheet for specific detection limit.

(2) At the source.

(P) Proposed.

s Secondary standard

Longer-term: approximately 7 years, or 10% of an individual's lifetime.

Lifetime: approximately 70 years.

## GROUND WATER SAMPLES SUMMARY, WHEELER PIT, LaPRAIRIE TOWNSHIP, WISCONSIN

SUMMARY ANALYTICAL RESULTS FOR PHASE II  
GROUND WATER SAMPLES ONLY  
WHEELER PIT  
LaPRAIRIE TOWNSHIP  
WISCONSIN

DRINKING WATER CRITERIA ARE FROM ODW 9/27/88 DRAFT  
last updated 12/21/88

SAMPLING LOCATION/SAMPLE NUMBER (WF-)	GW A-02	GW B-02	FIELD BLANK 1	FIELD BLANK 2	TRIP BLANK 1 (VOA ONLY)	TRIP BLANK 2 (VOA ONLY)	AMBIENT WATER QUALITY CRITERIA					
							Protection of Human Health				Protection of Aquatic Life	
							Toxicity Protection		Carcinogenicity Protection (1)		Freshwater	
							Ingesting	Ingesting	Ingesting	Ingesting	Acute	Chronic
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	Maximum Level (MCL)	Only	Organisms	Organisms Only		
CHEMICAL							mg/l					
<b>INORGANICS (mg/l)</b>												
Aluminum	ND	ND	ND	ND	NA	NA	--	0.146	45	--	--	--
Antimony	.005 (R)	.0057 (J)	.005 (R)	.005 (R)	NA	NA	--	--	--	--	--	--
Arsenic	ND	ND	ND	ND	NA	NA	0.05	--	2.2E-6	1.75E-5	0.36	0.19
Barium	ND	ND	ND	ND	NA	NA	1.0	--	--	--	--	--
Beryllium	ND	ND	ND	ND	NA	NA	--	--	3.7E-6	6.41E-5	--	--
Cadmium	3.4E-4 (J)	5.9E-4 (J)	2.0E-4 (J)	2.0E-4 (UNS)	NA	NA	0.01	0.01	--	--	1.8E-3	6.6E-4
Calcium	117	144	ND	ND	NA	NA	--	--	--	--	--	--
Chromium (Total)	.0035	.0038	ND	ND	NA	NA	0.05	0.05	--	--	0.016	0.011
Cobalt	ND	ND	ND	ND	NA	NA	--	--	--	--	--	--
Copper	ND	.02	ND	ND	NA	NA	1.3 s (P)	--	--	--	9.2E-3	6.5E-3
Iron	ND	ND	ND	ND	NA	NA	0.3	--	--	--	--	--
Lead	ND	ND	ND	ND	NA	NA	.005 (P)	0.05	--	--	0.034	1.3E-3
Magnesium	39.8 (N)	35.2 (N)	.09 (N)	ND	NA	NA	--	--	--	--	--	--
Manganese	ND	.756	ND	ND	NA	NA	.05 s	--	--	--	--	--
Mercury	ND	ND	ND	ND	NA	NA	0.002	1.44E-4	1.46E-4	--	2.4E-3	1.2E-5
Nickel	ND	ND	ND	ND	NA	NA	--	0.0134	0.1	--	1.1	0.056
Potassium	.576	4.3	ND	ND	NA	NA	--	--	--	--	--	--
Selenium	ND	ND	ND	ND	NA	NA	0.01	0.01	--	--	0.26	0.035
Silver	ND	ND	ND	ND	NA	NA	0.05	0.05	--	--	1.2E-3	--
Sodium	10.2	64.4	ND	ND	NA	NA	--	--	--	--	--	--
Thallium	.005 (UNS)	.005 (UNS)	.005 (UNS)	.005 (UNS)	NA	NA	--	0.013	0.048	--	--	--
Vanadium	ND	ND	ND	ND	NA	NA	--	--	--	--	--	--
Zinc	.139	.08	ND	ND	NA	NA	5.0 s	--	--	--	0.18	0.047
Cyanide	ND	ND	ND	ND	NA	NA	0.2	0.2	--	--	0.022	5.2E-3
<b>INDICATOR PARAMETERS (mg/l.)</b>												
Biochemical Oxygen Demand	ND	ND	1	2	NA	NA						
Alkalinity	283	439	ND	ND	NA	NA						
Chloride	50	119	ND	ND	NA	NA	250 s					
Chemical Oxygen Demand	ND	ND	ND	ND	NA	NA						
Total Kjeldahl Nitrogen	ND	ND	ND	ND	NA	NA						

## GROUND WATER SAMPLES SUMMARY, WHEELER PIT, LAFRAIRIE TOWNSHIP, WISCONSIN

SUMMARY ANALYTICAL RESULTS FOR PHASE II  
GROUND WATER SAMPLES ONLY  
WHEELER PIT  
LAFRAIRIE TOWNSHIP  
WISCONSIN

DRINKING WATER CRITERIA ARE FROM OOW 9/27/88 DRAFT  
last updated 12/21/88

SAMPLING LOCATION/SAMPLE NUMBER (UP-)	GW A-02	GW B-02	FIELD BLANK 1	FIELD BLANK 2	TRIP BLANK 1 (VOA ONLY)	TRIP BLANK 2 (VOA ONLY)	AMBIENT WATER QUALITY CRITERIA					
							Protection of Human Health				Protection of Aquatic Life	
							Toxicity Protection		Carcinogenicity Protection (1)		Freshwater	
							Ingesting	Ingesting	Ingesting	Ingesting	Acute	Chronic
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	Maximum	Only	Organisms	Organisms		
CHEMICAL							Level (MCL)	Organisms	Only	Organisms	Only	
INDICATOR PARAMETERS (mg/l) (cont)												
Ammonia Nitrogen	.11	.37	.19	.19	NA	NA						
Sulfate	38	47	ND	ND	NA	NA	250 s					
Nitrite + Nitrate Nitrogen	17.9	5.89	ND	ND	NA	NA						
Total Dissolved Phosphorus	.02	.02	ND	ND	NA	NA						
Total Dissolved Solids	480	700	ND	ND	NA	NA	500 s					
VOLATILES (mg/l)												
Acetone	ND	ND	.016 (J)	.06 (J)	ND	ND	--	--	--	--	--	--
Methylene Chloride	.006 (UJB)	ND	ND	.002 (J)	.006 (UJB)	ND	--	--	1.9E-4	0.0157	--	--
2-butanone [(methyl ethyl ketone), (MEK)]	.01 (R)	.01 (R)	.01 (R)	.01 (R)	.01 (R)	.01 (R)	--	--	--	--	--	--
Benzene	UJ	UJ	UJ	UJ	UJ	UJ	.005	--	6.6E-4	0.04	--	--
Toluene	UJ	UJ	UJ	UJ	UJ	UJ	2 (P)	14.3	424	--	--	--
Chlorobenzene	UJ	UJ	UJ	UJ	UJ	UJ						
Ethylbenzene	UJ	UJ	UJ	UJ	UJ	UJ	.7 (P)	1.4	3.28	--	--	--
Styrene	UJ	UJ	UJ	UJ	UJ	UJ						
Xylenes (total)	UJ	UJ	UJ	UJ	UJ	UJ	10 (P)	--	--	--	--	--
SEMIVOLATILES (mg/l)												
1,3-dichlorobenzene (m-dichlorobenzene)	ND	ND	ND	ND	NA	NA	.6 (P)	.4	2.6	--	--	--
1,4-dichlorobenzene (p-dichlorobenzene)	ND	.025	ND	ND	NA	NA	.075	.4	2.6	--	--	--
Di-n-butylphthalate	ND	.004 (UJB)	.003 (UJB)	.003 (UJB)	NA	NA	--	3,400	154,000	--	--	--
Di-n-octyl phthalate	ND	ND	ND	ND	NA	NA	--	--	--	--	--	--
Benzo(b)fluoranthene	ND	ND	ND	ND	NA	NA	--	--	--	2.8E-6	3.11E-5	--
Benzo(k)fluoranthene	ND	ND	ND	ND	NA	NA	--	--	--	2.8E-6	3.11E-5	--
Benzo(a)pyrene	ND	ND	ND	ND	NA	NA	--	--	--	2.8E-6	3.11E-5	--
Benzo(g,h,i)perylene	ND	ND	ND	ND	NA	NA	--	--	--	2.8E-6	3.11E-5	--
Dibenz(a,h)anthracene	ND	ND	ND	ND	NA	NA	--	--	--	2.8E-6	3.11E-5	--
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	NA	NA	--	--	--	2.8E-6	3.11E-5	--

## GROUND WATER SAMPLES SUMMARY, WHEELER PIT, LAFRAIRIE TOWNSHIP, WISCONSIN

SUMMARY ANALYTICAL RESULTS FOR PHASE II  
GROUND WATER SAMPLES ONLY  
WHEELER PIT  
LAFRAIRIE TOWNSHIP  
WISCONSIN

DRINKING WATER CRITERIA ARE FROM ODW 9/27/88 DRAFT  
last updated 12/21/88

SAMPLING LOCATION/SAMPLE NUMBER (WF-)	GW A-02	GW B-02	FIELD BLANK 1	FIELD BLANK 2	TRIP BLANK 1 (VOA ONLY)	TRIP BLANK 2 (VOA ONLY)	AMBIENT WATER QUALITY CRITERIA					
							Protection of Human Health			Protection of Aquatic Life		
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	Toxicity Protection		Carcinogenicity Protection (1)	Freshwater		
							Maximum	Ingesting		Ingesting	Acute	Chronic
CHEMICAL							Level (MCL)	Organisms	Only	Organisms	Only	
Tenatively Identified Basic Neutral Acids (TBNA) (mg/l)												
9-Octadecanamide, (E)-	ND	ND	ND	ND	NA	NA						
Propanenitrile, 2,2'-Azobis[2-methyl	ND	ND	ND	ND	NA	NA						
Ethanol, 2-(2-methoxyethoxy)-	ND	ND	ND	ND	NA	NA						
Ethanol, 2-(2-butoxyethoxy)-	ND	ND	ND	ND	NA	NA						
Phosphorous dichloride, [methyl	ND	ND	ND	ND	NA	NA						
(1-methyl)chlorohexyl]-					NA	NA						
Methane, tert-butoxyisopropoxy-	ND	ND	ND	ND	NA	NA						
Tenatively Identified Volatile Organic Acid (TVOA) (mg/l)												
Cyclohexane, 1,1-dimethyl-	ND	ND	ND	ND	NA	NA						
Cyclohexane, 1,2-dimethyl-,trans-	ND	ND	ND	ND	NA	NA						
Cyclohexane, 1,4-dimethyl-,cis-	ND	ND	ND	ND	NA	NA						
Decane, 2,3,8-Trimethyl-	ND	.0086 (J)	ND	ND	NA	NA						
Heptane, 2,2-dimethyl-	ND	.015 (J)	ND	ND	NA	NA						

(B) Indicates detected in blank and in the sample; possible/probable blank contamination.

(J) Indicates an estimated value.

(N) Indicates inorganic spike sample recovery is not within control limits.

(R) Indicates data is unusable.

(S) Indicates value determined by Method of Standard Addition.

(W) Post-digestion spike which is out of control for AA analysis

(X) Manual calculation by lab

(+) Correlation coefficient < 0.995

NA Indicates not analysed.

ND Indicates not detected; see data sheet for specific detection limit.

(2) At the source.

(P) Proposed.

s Secondary standard

Longer-term: approximately 7 years, or 10% of an individual's lifetime.

Lifetime: approximately 70 years.

## SUBWASTE SOIL SAMPLES SUMMARY, WHEELER PIT, LaPRAIRIE TOWNSHIP, WISCONSIN

SUMMARY ANALYTICAL RESULTS FOR PHASE II RI  
 SUBWASTE SOIL SAMPLES ONLY  
 WHEELER PIT  
 LaPRAIRIE TOWNSHIP  
 WISCONSIN

SAMPLING LOCATION/SAMPLE NUMBER (WP-)	SS01-15-02	SS01-15-92 DUP SS01-15-02	SS02-15-02	SS03-19-02	SS04-24-02	SS06-30-02	SS07-10-02	SS07-20-02 DUP SS07-10-02
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	
CHEMICAL								
<b>INORGANICS (mg/kg)</b>								
Aluminum	552	588	1460	712	974	383	691	900
Antimony	ND	ND	1.2 (J)	ND	ND	ND	ND	ND
Arsenic	ND	.41 (JUN)	ND	.43 (JN)	1.2 (JN)	.62 (JN)	.55 (JN)	.49 (JN)
Barium	ND	ND	55.4 (N)	45.5 (N)	ND	ND	ND	ND
Beryllium	ND	ND	.04 (S)	ND	.04 (S)	ND	ND	.04 (S)
Cadmium	ND	ND	.09 (J)	.08 (J)	.13 (JN+)	ND	.09 (JNS)	ND
Calcium	56800 (J)	45500 (J)	112000 (J)	50400 (J)	85400 (J)	42500 (JN)	56700 (JN)	86400 (JN)
Chromium (Total)	4.3	3	8.8	2.5	10.1	10.5	3	4.4
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND
Copper	ND	ND	6.8	ND	6.2	ND	6.4	7.8
Iron	2000	1620	4110	2120	2680	1650	1060	2920
Lead	1.7 (WS)	.74 (N)	1.3 (N)	1 (N)	1.6 (N)	1.2 (N)	1.5 (N)	1.5 (N)
Magnesium	22300	16600	42300	18700	34600	16100	22300	32200
Manganese	70.8	61.3	136	74.5	122	56.2	82.2	116
Mercury	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	ND	ND	ND	ND	ND	ND	ND	ND
Potassium	103 (JN)	118 (JN)	277 (JN)	124 (JN)	173 (JN)	75.8 (JN)	109 (JN)	122 (JN)
Selenium	ND	ND	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND	ND
Sodium	976 (N)	998 (N)	205 (N)	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND	ND	ND	ND
Vanadium	6 (JN+)	2.3 (JN)	9.2 (JN+)	5.4 (JNS)	6.7 (JNS)	4.3 (JN+)	3.3 (JNS)	6.5 (JNS)
Zinc	3.2	2.3	7	4.1	6.4	3.7	5.9	6.8
Cyanide	ND	ND	ND	ND	ND	ND	ND	ND
<b>VOLATILES (mg/kg)</b>								
Acetone	ND	ND	.025 (UJB)	ND	.110 (UJB)	ND	ND	ND
Methylene Chloride	.012 (UJB)	.015 (UJB)	.007 (UJB)	.008 (UJB)	.008 (UJB)	.009 (UJB)	.009 (UJB)	.010 (UJB)
2-butanone [(methyl ethyl ketone), (MEK)]	.010 (RU)	.010 (RU)	.010 (RU)	.010 (RU)	.010 (RU)	.010 (RU)	.010 (RU)	.010 (RU)
Benzene	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	.005 (J)	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	.006	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (total)	ND	ND	ND	ND	.042 (X)	ND	ND	ND

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SUMMARY ANALYTICAL RESULTS FOR PHASE II RI  
SUBWASTE SOIL SAMPLES ONLY  
WHEELER PIT  
LAFRAIRIE TOWNSHIP  
WISCONSIN

SAMPLING LOCATION/SAMPLE NUMBER (WP-)	SS01-15-02	SS01-15-92 DUP SS01-15-02	SS02-15-02	SS03-19-02	SS04-24-02	SS06-30-02	SS07-10-02	SS07-20-02 DUP SS07-10-02
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	
<b>SEMIVOLATILES (mg/kg)</b>								
Benzoic acid	ND	ND	.040 (J)	ND	ND	ND	ND	ND
Diethylphthalate	ND	ND	ND	.043 (J)	.029 (J)	ND	ND	ND
Phenanthrene	ND	ND	.120 (J)	ND	ND	ND	ND	ND
Anthracene	ND	ND	.024 (J)	ND	ND	ND	ND	ND
Di-n-butylphthalate	.210 (UJB)	.120 (UJB)	.210 (UJB)	.170 (UJB)	.200 (UJB)	0.043 (UJB)	.043 (UJB)	.041 (UJB)
Butylbenzylphthalate	.083 (UJB)	ND	2.100	.029 (J)	.150 (J)	ND	ND	ND
bis(2-Ethylhexyl)phthalate	2.100	.830	ND	.037 (J)	.096 (J)	ND	ND	ND
Fluoranthene	ND	ND	.160 (J)	ND	ND	ND	ND	ND
Pyrene	ND	ND	.100 (J)	ND	ND	ND	ND	ND
Butyl benzyl phthalate	ND	ND	8.200 (D)	ND	ND	ND	ND	ND
Benzo(a)anthracene	ND	ND	.048 (J)	ND	ND	ND	ND	ND
Chrysene	ND	ND	.059 (J)	ND	ND	ND	ND	ND
bis(2-ethylhexyl)phthalate	ND	ND	.350 (J)	ND	ND	ND	ND	ND
Di-n-octyl phthalate	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ND	ND	.070 (J)	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	ND	.038 (J)	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ND	ND	.024 (J)	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	.032 (J)	ND	ND	ND	ND	ND
<b>Tentatively identified Base Neutral Acids</b>								
<b>TBNA (mg/kg)</b>								
1,2-Benzenedicarboxylic Acid	ND	ND	.170 (J)	ND	ND	ND	ND	ND
Phthalic Anhydride	ND	ND	1.500 (J)	.410 (J)	.200 (J)	ND	ND	ND
Methanone(2,4-Dihydroxyphenyl)phenyl-	ND	ND	1.100 (J)	ND	ND	ND	ND	ND
Ethanone, 2,2-dimethoxy-1,2-diphenyl	ND	ND	.140 (J)	ND	ND	ND	ND	ND
Hexanoic acid, 2-ethyl-,oxybis	ND	ND	.220 (J)	ND	ND	ND	ND	ND
(2,1-ethanedioxy-2,1-ethanedioyl)ES-								
Myristic acid,2-(1-octadecyloxy)	ND	ND	1.200 (J)	ND	ND	ND	ND	ND
ethyl ester, (E)								
Benzenesethamine,n-methyl-4-nitro-n-	ND	ND	2.000 (J)	ND	ND	ND	ND	ND
(2-phenylethyl)-								
Hexadecanoic acid,1,2-ethanedioyl ester	ND	ND	.760 (J)	ND	ND	ND	ND	ND
2(5H)-Furanone, 3,5,-Dimethyl-	ND	.150 (J)	ND	ND	ND	ND	ND	ND



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WISCONSIN

SAMPLING LOCATION/SAMPLE NUMBER (WP-)	SS01-15-02	SS01-15-92 DUP SS01-15-02	SS02-15-02	SS03-19-02	SS04-24-02	SS06-30-02	SS07-10-02	SS07-20-02 DUP SS07-10-02
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	
<b>TEMA (mg/kg) (cont)</b>								
Octadecanal	.140 (J)	ND	ND	ND	ND	ND	ND	ND
Pyridinium, 1-hexadecyl-, chloride monohydrate	.160 (J)	ND	ND	ND	ND	ND	ND	ND
1-Hexadecanaminium, N,N,N-trimethyl-, bromide	.590 (J)	ND	ND	ND	ND	ND	ND	ND
Octadecane, 1-chole-	.450 (J)	ND	ND	ND	ND	ND	ND	ND
3-Hexanamine, 3-ethyl-	1.000 (J)	ND	ND	ND	ND	ND	ND	ND
Octadecane, 1-bromo-	.180 (J)	ND	ND	ND	ND	ND	ND	ND
3-Octadecene, (E)-	1.000 (J)	1.100 (J)	ND	ND	ND	ND	ND	ND
7-Hexadecene, (E)-	.160 (J)	ND	ND	ND	ND	ND	ND	ND
Furan, 3-(4,8-dimethyl-3,7-nonadienyl-, (E)-	.210 (J)	ND	ND	ND	ND	ND	ND	ND
1H-Pyrido(3,4-B)indole	ND	ND	ND	.350 (J)	ND	ND	ND	ND
Sulfur, Mol. (S8)	ND	ND	ND	ND	ND	.160 (J)	ND	ND
<b>Tenatively identified Volatile Organic Acid (TVOA) (mg/kg)</b>								
Silane, trimethyl	.014 (UJB)	.011 (UJB)	.013 (UJB)	.012 (UJB)	.0092 (UJB)	.011 (UJB)	.011 (UJB)	.0093 (UJB)
Cyclotetrasiloxane, octamethyl-	ND	.110 (J)	ND	ND	ND	ND	.026 (J)	ND
Cyclooctane, 1,4-dimethyl-, trans	ND	ND	ND	ND	.0054 (J)	ND	ND	ND
<b>P/PCB</b>								
No Compounds Detected	ND	ND	ND	ND	ND	ND	ND	ND

KEY:

- Note that all USEPA volatile sample fractions exceeded the required maximum holding time of 7 days by 10 days; therefore all positive results are estimated (J)
- (B) Indicates detected in blank and in the sample; possible/probable blank contamination.
- (J) Indicates an estimated value.
- (W) Indicates inorganic spike sample recovery is not within control limits.
- (E) Indicates data is unusable.
- (S) Indicates value determined by Method of Standard Addition.
- (W) Post-digestion spike which is out of control for AA analysis
- (X) Manual calculation by lab
- (+) Correlation coefficient < 0.995
- NA Indicates not analysed.
- ND Indicates not detected; see data sheet for specific detection limit.
- (2) At the source.
- (P) Proposed.
- s Secondary standard
- Longer-term: approximately 7 years, or 10X of an individual's lifetime.

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SURFACE SOIL SAMPLES ONLY  
WHEELER PIT  
LEPRAIRIE TOWNSHIP  
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SAMPLING LOCATION/SAMPLE NUMBER (WP-)	SD01-02	SD02-02	SD02-92 DUP SD02-02	SD03-02	SD04-02 BACKGROUND	SD05-02	SD06-02
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989
<b>CHEMICAL</b>							
<b>INORGANICS (mg/kg)</b>							
Aluminum	11600	7620	8180	9130	1430	2300	4750
Antimony	ND	ND	ND	ND	ND	ND	ND
Arsenic	4.2 (JW+)	5.1 (JWS)	6.5 (JWS)	5.4 (JWS)	ND	.68 (JW+)	1.6 (JW+)
Barium	178 (N)	130 (N)	142 (N)	226 (N)	62.2 (N)	54.2 (N)	210 (N)
Beryllium	.56 (S)	.43 (J+)	.44 (S)	.62 (S)	.06 (S)	.13 (S)	.48 (S)
Cadmium	.14 (JW)	.14 (JWS)	.08 (JW+)	.36 (JWS)	.1 (JW+)	.26 (JWS)	1 (JWS)
Calcium	1780 (JW)	2560 (JW)	2080 (JW)	3640 (JW)	72300 (JW)	59500 (JW)	35000 (JW)
Chromium (Total)	16.2	11.8	11	14.3	7.4	6.7	18.9
Cobalt	ND	ND	ND	ND	ND	ND	ND
Copper	5.7	6.6	9.4	12	5.3	6.3	14.5
Iron	12900	10000	10800	13100	3420	4800	8500
Lead	60.8 (N)	34.5 (N)	16.3 (N)	34.9 (N)	10.3 (NS)	25.4 (N)	94.4 (N)
Magnesium	1930	1960	2100	2610	23200	23400	13600
Manganese	580	430	504	1020	156	249	306
Mercury	ND	ND	ND	ND	ND	ND	ND
Nickel	14.1	11.2	ND	13.1	ND	ND	10.2
Potassium	769 (JW)	963 (JW)	924 (JW)	1670 (JW)	333 (JW)	362 (JW)	860 (JW)
Selenium	ND	ND	ND	ND	ND	ND	ND
Silver	ND	ND	ND	ND	ND	ND	ND
Sodium	ND	ND	ND	ND	ND	ND	ND
Thallium	ND	ND	ND	ND	ND	ND	ND
Vanadium	9.4 (JW+)	12.4 (JWS)	23.5 (JWS)	21.4 (JW+)	6.8 (JWS)	8.4 (JWS)	14.2 (JWS)
Zinc	69.9	55.6	43.2	65.3	10.9	46.1	93.2
Cyanide	4.6	6	7.3	18.7	ND	ND	ND
<b>VOLATILES (mg/kg)</b>							
Acetone	.02 (UJB)	.019 (UJB)	ND	.017 (J)	ND	ND	ND
Methylene Chloride	.1 (UJB)	.130 (UJB)	.064 (UJB)	0.2 (UJB)	.011 (UJB)	.062 (UJB)	.093 (UJB)
2-butanone [(methyl ethyl ketone), (MEK)]	.013 (RU)	.013 (RU)	.013 (RU)	.014 (RU)	.011 (RU)	.011 (RU)	.013 (RU)
Benzene	ND	ND	ND	ND	ND	ND	ND
Toluene	.002 (UJB)	.002 (UJB)	.002 (UJB)	.001 (UJB)	.0006 (UJB)	.0006 (UJB)	.002 (UJB)
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND

SURFACE SOIL SAMPLES SUMMARY, WHEELER PIT, LAFRAIRIE TOWNSHIP, WISCONSIN

SUMMARY ANALYTICAL RESULTS FOR PHASE II RI  
SURFACE SOIL SAMPLES ONLY  
WHEELER PIT  
LAFRAIRIE TOWNSHIP  
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SAMPLING LOCATION/SAMPLE NUMBER (WP-)	SD01-02	SD02-02	SD02-92 DUP SD02-02	SD03-02	SD04-02 BACKGROUND	SD05-02	SD06-02
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989
<b>VOLATILES (mg/kg) (cont)</b>							
Xylenes (total)	ND	ND	ND	ND	ND	ND	ND
<b>SEMIVOLATILES (mg/kg)</b>							
Diethylphthalate	.130 (J)	.120 (J)	ND	.180 (J)	.033 (J)	.044 (J)	.130 (J)
Phenanthrene	ND	.019 (J)	ND	ND	ND	ND	.050 (J)
Di-n-butylphthalate	.130 (UJB)	.160 (UJB)	.082 (UJB)	.230 (UJB)	.230 (UJB)	.310 (UJB)	.750 (UJB)
Fluoranthene	ND	.029 (J)	ND	ND	ND	ND	.096 (J)
Pyrene	ND	.030 (J)	ND	ND	ND	ND	.110 (J)
Butyl benzyl phthalate	1.200	.250 (J)	.500 (J)	.550 (J)	.280 (J)	7. (JD)	7.200 (JD)
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	.049 (J)
bis(2-ethylhexyl)phthalate	.059 (J)	ND	ND	ND	ND	ND	.160 (J)
Di-n-octyl phthalate	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	.110 (J)
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND
Dibenz(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND
<b>Tentatively identified Fane Neutral Acids</b>							
<b>THFA (mg/kg)</b>							
Naphthalene, decahydro-4A-methyl-	.980 (J)	ND	ND	ND	ND	ND	ND
Dodecane, 2-Methyl-	ND	.360 (J)	ND	.470 (J)	ND	ND	ND
Octadecane	ND	ND	.250 (J)	ND	ND	ND	ND
Octadecanal	ND	.770 (J)	.910 (J)	1.0 (J)	ND	ND	ND
Glycine, N-methyl-N(1-oxododecyl)-	ND	.190 (J)	ND	ND	ND	ND	ND
Phosphonic acid, dioctadecyl, ester	ND	.830 (J)	ND	ND	ND	ND	ND
Oxirane, [(hexadecyloxy)methyl]-	ND	.340 (J)	ND	ND	ND	ND	ND
1H-Cycloprop(E)anulene	ND	.660 (J)	1.0 (J)	ND	ND	ND	ND
decahydro-1, 1, 7-trimethyl-4-methylene-(1AR)							
Cholesta-5-ene, 3-bromo, (3.beta)	ND	0.65 (J)	ND	ND	ND	ND	ND
Pregna-4-ene-3, 20-dione, (10.alpha)-	ND	.230 (J)	ND	ND	ND	ND	ND

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SAMPLING LOCATION/SAMPLE NUMBER (WP-)	SD01-02	SD02-02	SD02-92 DUP SD02-02	SD03-02	SD04-02 BACKGROUND	SD05-02	SD06-02
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989
TEHA (mg/kg) (cont)							
Undecane, 2-methyl-	ND	ND	.350 (J)	ND	ND	ND	ND
17-Pentatriacontene	ND	ND	2.900 (J)	1.0 (J)	ND	ND	ND
decahydro-1,1,7-trimethyl-r-methylene-							
(1AR)							
Cholest-5-ene, 3-bromo, (3.beta.)-	ND	ND	1.500 (J)	ND	ND	ND	ND
Pregn-4-ene-3, 20-dione, (10.alpha.)	ND	ND	.460 (J)	ND	ND	.270 (J)	ND
Nonadecanol	ND	ND	.690 (J)	ND	ND	ND	.280 (J)
Decanedioic acid, didecyl ester	ND	ND	.210 (J)	ND	ND	ND	ND
Tetracontane, 3,3,24-trimethyl	ND	ND	ND	.340 (J)	ND	ND	.230 (J)
Heptadecane, 2,6-dimethyl-	ND	ND	ND	.720 (J)	1.30(J)	.440 (J)	.680 (J)
1-Heptanol, 2-propyl-	ND	ND	ND	ND	.150 (J)	ND	ND
3-Cyclohexene-1-methanol,.alpha.,	ND	ND	ND	ND	.150 (J)	ND	ND
4-dimethyl-.alpha.-(4-methyl-3-penta-)							
Anisole, m-tridecyl-	ND	ND	ND	ND	.200 (J)	ND	ND
Dibenzyl Phthalate	ND	ND	ND	ND	ND	.400 (J)	.620 (J)
Dodecane, 2-Methyl-	ND	ND	ND	ND	ND	ND	1.200 (J)
Phthalic Anhydride	ND	ND	ND	ND	ND	ND	.230 (J)
9,12,15-Octadecatrienal	ND	ND	ND	ND	ND	ND	.240 (J)
1,2-Benzenedicarboxylic acid,	ND	ND	ND	ND	ND	ND	.730 (J)
butyloctadecyl ester							
1,2-Benzenedicarboxylic acid,	ND	ND	ND	ND	ND	ND	.820 (J)
mono(2-ethylhexyl)ester							
Tridecanal	ND	ND	ND	ND	ND	ND	.520 (J)
2,5-Furandione,3-(dodecanyl)dihydro	ND	ND	ND	ND	ND	ND	.500 (J)
tentatively identified Volatile Organic Acid TVOA (mg/kg)							
Silanol, trimethyl	.019 (UJB)	.013 (UJB)	.012 (UJB)	.015 (UJB)	.019 (UJB)	.010 (UJB)	.022 (UJB)
Cyclotetrasiloxane, octamethyl	ND	ND	ND	ND	ND	ND	.019 (UJB)
Silane, trimethyl-1-propenyl	.046 (J)	ND	ND	ND	ND	ND	ND
Trisiloxane, octamethyl-	ND	ND	ND	ND	.011 (J)	ND	ND

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SAMPLING LOCATION/SAMPLE NUMBER (WP-)	SD01-02	SD02-02	SD02-92 DUP SD02-02	SD03-02	SD04-02 BACKGROUND	SD05-02	SD06-02
MONTH SAMPLED	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989	April, 1989
P/PCB (mg/kg)							
4,4-DDT	ND	ND	ND	ND	ND	ND	.028

KEY:

Note that all USEPA volatile sample fractions exceeded the required maximum holding time of 7 days by 10 days; therefore all positive results are estimated (J).

(B) Indicates detected in blank and in the sample; possible/probable blank contamination.

(J) Indicates an estimated value.

(H) Indicates inorganic spike sample recovery is not within control limits.

(E) Indicates data is unusable.

(S) Indicates value determined by Method of Standard Addition.

(W) Post-digestion spike which is out of control for AA analysis

(X) Manual calculation by lab

+ Correlation coefficient < 0.995

NA Indicates not analysed.

ND Indicates not detected; see data sheet for specific detection limit.

(2) At the source.

(P) Proposed.

s Secondary standard

Longer-term: approximately 7 years, or 10% of an individual's lifetime.

Lifetime: approximately 70 years.